C L A I M S

1. Process for the preparation of hydrogen and carbon monoxide containing gas from a carbonaceous feedstock by performing the following steps:
(a) partial oxidation of a carbonaceous feedstock in an vertically oriented tubular partial oxidation reactor vessel comprising a burner at its upper end thereby obtaining a first gaseous product of hydrogen and carbon monoxide,
(b) catalytic steam reforming a carbonaceous feedstock in the presence of steam in a Convective Steam Reformer Zone thereby obtaining a steam reformer product,
(c) reducing the temperature of the first gaseous product of step (a) by mixing this product with the steam reformer product of step (b),
(d) contacting the mixture obtained in step (c) with a post reforming catalyst, and
(e) providing the required heat for the convective steam reforming reaction zone in step (b) by convective heat exchange between the mixture obtained in step (d) and the steam reformer reactor zone thereby obtaining a hydrogen and carbon monoxide containing gas having a reduced temperature.
2. Process according to claim 1, wherein the steam to carbon molar ratio of the feed to step (b) is between 0.5 and 0.9.
3. Process according to any one of claims 1-2, wherein the temperature of the first gaseous product of hydrogen and carbon monoxide obtained in step (a) is between 1100

and 1500 °C and wherein this temperature is reduced by between 300 and 750 °C in step (c).

4. Process according to any one of claims 1-3, wherein step (c) is performed by feeding the steam reformer product to the lower end of the partial oxidation reactor vessel.

5. Process according to claim 4, wherein step (d) is performed in a bed of catalyst positioned in the lower end of the partial oxidation reactor vessel just below the position at which the steam reformer product is fed to said reactor.

6. Process according to any one of claims 1-5, wherein the content of methane in the steam reformer product is between 1 and 10 mol% relative to the carbon present as hydrocarbon in the carbonaceous feed to step (b).

7. Process according to any one of claims 1-6, wherein the methane conversion in step (d) is between 10 and 50 wt%.

8. Process according to any one of claims 1-7, wherein the temperature of the mixture obtained in step (d) is between 950 and 1100 °C, preferably between 980 and 1050 °C.